<div align="center">**REMARKS**</div>

By this amendment, claims 1 through 4, 6, 8 through 13, 15, 17 through 20, 23, and 24 are pending. Claims 5 and 14 were previously canceled without prejudice or disclaimer. Claims 7, 16, 21, and 22 are currently canceled without prejudice or disclaimer. Claim 19 stands withdrawn from consideration pursuant to the provisions of 37 C.F.R. §1.142(b). Claims 1 through 3, 8 through 13, 15, 17, 18, and 23 are currently amended. Care has been exercised to avoid the introduction of new matter. Adequate descriptive support for the present Amendment should be apparent throughout the originally-filed disclosure, e.g., Specification, paragraphs [0027], [0067], [0078], [0080], [0091], [0094], [0124]. Applicant submits that the present Amendment does not generate any new matter issue.

The Office Action mailed August 18, 2009 rejected claim 10 under the first paragraph of 35 U.S.C. §112 as failing to comply with the written description requirement, claims 1 through 4, 6 through 13, 15 through 18, and 20 through 24 under the second paragraph of 35 U.S.C. §112 for indefiniteness, claims 1 through 3, 9 through 12, and 24 under 35 U.S.C. §102(e)/103(a) as anticipated by Wall et al. ("Wall") (US 7,043,736) or, alternatively, obvious over Wall, and claims 4, 6 through 8, 13, 15 through 18, and 20 through 23 as obvious under 35 U.S.C. §103(a) based on Wall in view of Adler (US 2002/0169658).

The rejection of claim 10 under the first paragraph of 35 U.S.C. §112 is respectfully traversed.

Claim 10 has been clarified by reciting, "a modeling module configured to generate, via the one or more processors, a financial model..." Thus, it is clear that the modeling module generates the financial model "via" at least one "processor." Thus, the financial module is

generated when instructions in the modeling module are executed by a processor.   Support for the now-claimed processor may be found, for example in Fig. 5, processor 503, with the financial model generated, for example, at step 203 in Fig. 2.

Accordingly, there is clear support in the original disclosure for that which is now claimed; therefore there is an adequate written description, in compliance with the first paragraph of 35 U.S.C. §112.

Accordingly, the rejection of claim 10 under the first paragraph of 35 U.S.C. §112 is not factually viable; therefore, withdrawal of this rejection is respectfully solicited.

The rejection of claims 1 through 4, 6 through 13, 15 through 18, and 20 through 24 under the second paragraph of 35 U.S.C. §112 is respectfully traversed.

The Examiner regarded the preambles of independent claims 1, 9, and 10 as indefinite since "forecasting is never addressed or accomplished by the invention claimed," and suggested amending the claim preambles to recite, "A method for generating a financial model..."

The Examiner's kind suggestion has been incorporated into claims 1, 9, and 10.   Thus, there is a clear correlation between the claim preambles and the body of the claims.

With regard to claims 1, 9, and 10, the Examiner also questioned whether "receiving one or more functor objects from the users responsive to the functor requests" should be --receiving one or more functor objects for the data and programs...--

The claims have now been clarified by reciting, "receiving one or more functor objects **containing the data and programs** from the users responsive to the functor requests," or something similar.

With regard to claims 1, 9, and 10, the Examiner further questioned whether the claim language "...linked to re-usable financial components based upon the collected functor objects containing the data and programs..." would be better described with reference to "...linked to re-usable financial components based upon the **received** functor objects containing the data and programs...," since the "functor objects were never collected in the invention claimed, only data was collected" (Office Action-page 6).

In accordance with the Examiner's kind suggestion, claims 1, 9, and 10 have been clarified by reciting, "the one or more processors generating a financial model, comprising a simulation framework linked to re-usable financial components based upon the **received functor objects** containing the data and programs," or something similar.

With regard to claims 1, 9, and 10, the Examiner further questioned the antecedent bases for "the collected functor objects containing the data and programs." Independent claim 1 has been clarified by reciting, "receiving one or more functor objects **containing the data and programs.**" Claims 9 and 10 have been similarly clarified.

The Examiner further asserted that the "wherein" clauses should be amended to "positively recite the steps or acts performed..." Accordingly, claim 1 has been clarified by reciting, "approving, by the users,_of selected ones of the financial components" in lieu of the "wherein" clause. However, the "wherein" clause of claim 9 ("wherein the financial model supports user approval of selected ones of the financial components") and the "wherein clause of claim 10 ("wherein the financial model is configured on the one or more processors to support

user approval of selected ones of the financial components") are believed definite and proper for the respective computer readable medium and system claims, since they further define a function of the financial model not easily recited as a computer readable medium or system component.

With regard to claims 2 and 11, the Examiner's kind suggestion has been incorporated into these claims so that claim 2 now recites, "mapping content from a plurality of cells of the spreadsheet to the one or more <u>functor</u> objects, wherein the content includes the data and programs for the functor objects for input into the financial model" and claim 11 now recites, "a spreadsheet-to-object mapper configured, via the one or more processors, to map content from a plurality of cells of the spreadsheet to the one or more functor objects, wherein the content includes the data and programs for the functor objects for input into the financial model."

Thus, claims 2 and 11 are now believed to be definite.

Claims 3 and 12 have been clarified by reciting, "mapping content including the data from a plurality of cells of the spreadsheet to one or more classes, wherein each of the one or more classes duplicates functionality of the spreadsheet when the functor object is used to encapsulate or access the one or more classes" and "a spreadsheet-to-class mapper configured, via the one or more processors, to map content including the data from a plurality of cells of the spreadsheet to one or more classes, wherein each of the one or more classes duplicates functionality of the spreadsheet when the functor object is used to encapsulate or access the one or more classes," respectively.

Thus, claims 3 and 12 are now believed to be definite.

Claims 8, 17, 18, and 23 have been similarly clarified to recite that functor requests request information relating to the financial model, with the functor request including a program to collect the information and to validate a response from a second user, while a response functor object is received from a second user responsive to the functor request conforming to a class interface specified by the first user. Also, the functor request is stored and the functor request is selectively forwarded to the second user.

Claims 10 through 13, 15, and 18 have further been clarified to make it clear that structural components, e.g., a "processor," act together, and that the mapper is configured by one or more processors to perform the recited functions.

Similarly, claim 23 has been clarified to make it clear that one or more processors are configured to perform the recited functions.

Therefore, these claims are definite.

Accordingly, withdrawal of the rejection of claims 1 through 4, 6 through 13, 15 through 18[1], and 20 through 24 (now claims 1 through 4, 6, 8 through 13, 15, 17, 18, 20, 23, and 24) under the second paragraph of 35 U.S.C. §112 is respectfully solicited.

The rejection of claims 1 through 3, 9 through 12, and 24 under 35 U.S.C. §102(e) is respectfully traversed.

Independent claim 1 recites, *inter alia*, "issuing functor requests through a workflow router to users for data and programs; and receiving one or more functor objects containing the

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[1] Claims 7 and 16 have been canceled.

data and programs from the users responsive to the functor requests" and "generating a financial model, comprising a simulation framework linked to re-usable financial components based upon the received functor objects containing the data and programs." Independent claims 9 and 10 recite similar features. Wall lacks any disclosure of at least these claim features.

Wall discloses nothing even remotely related to the claimed "functor requests" or "functor objects." Wall is substantially different from the claimed invention. For example, the ultimate computations of interest are performed by the "emergent model" in Wall, whereas the ultimate computations in the claimed invention are performed by a generated financial model that supports user approval of selected components. The claimed invention and Wall differ greatly in their approach to building a model.

Moreover, the claimed functor request objects or functor objects are objects that store and transport other programs across the network as one feature. In contradistinction thereto, the objects in Wall are merely plain "objects" and have no relationship to the claimed functor request objects or functor objects. This is a major distinction and, for at least this reason, Wall does not anticipate, or even or make obvious, the claimed invention.

Further, the programs attached to the functor requests in claim 8, and the data and programs attached to functor objects in claim 1 are programs that are attached or designated at runtime by the user, *viz*., "**approving, by the users**, of selected ones of the financial components" (claim 1) and "a response functor object received from the second user responsive to the functor request **conforming to a class interface specified by the first user**" (claim 8).

The "data objects and/or functions" in Wall are actual structures that perform the computations of ultimate interest in the model or simulation, and are manually combined into an emergent model using references to link distributed objects. However, the functor requests and

the functor objects of the claimed invention cooperate to specify and transport "data and programs" which will perform the actual computations of ultimate interest once combined with the simulation framework. Wall clearly has no structure corresponding to the claimed functor request that would allow a user building a model to indicate formally to other users the types of objects that are needed to fulfill the premises of the model. Wall discloses no functor request object at all.

Wall, in fact, teaches away from the claimed invention. For example, in the abstract, Wall recites, "The emergent network of linked data objects and/or function objects are independently published to, and subscribed to, in a manner **free of a globally predefined network** of data objects and/or function objects, thereby generating the emergent model." This is in direct contrast to the claimed invention in which there is a predefined **simulation framework**. Independent claims 1 and 9 recite, *inter alia*, "the one or more processors generating a financial model, comprising **a simulation framework linked to re-usable financial components based upon the received functor objects containing the data and programs**," and independent claim 10 recites, *inter alia*, "a modeling module configured to generate, via the one or more processors, a financial model, comprising **a simulation framework linked to re-usable financial components based upon the received functor objects containing the data and programs**, wherein the financial model is configured on the one or more processors to support user approval of selected ones of the financial components." Support for this feature may be found, for example, as element 300 in Figure 3 and corresponding portions of the specification, such as page 14, for example. By way of explanation, the simulation framework, as disclosed and claimed, includes functor request objects and functor objects and has, as its purpose, the abstraction of essential states and

processes relevant for a target domain. The simulation framework provides a set of classes with pre-defined interrelationships that cooperate and assist in building the financial model. Framework classes are classified into broad categories, including entity state classes, operator classes, constraint classes, agent classes, functor requestor classes, and functor classes. Collectively, these classes are referred to as the "simulation framework." Wall neither teaches nor suggests such a "simulation framework" and, therefore, cannot anticipate or make obvious, the subject matter of claims 1-3, 9-12, and 24.

Responsive to similar arguments, provided in the previous response, the Examiner asserted, at page 23 of the Office Action, that the argued features were not recited in the claims. The functor objects are recited in the claims as "functor objects containing the data and programs." However, definitions need not be included within the claims themselves since the meanings of "functor," "functor request" and "functor object" are clear and ascertainable from reference to the disclosure. For example, it is disclosed at paragraph [0094] of the specification that a Functor Requestor class encapsulates a request that can be routed through workflow systems to request the provision of **a function in the form of a program and any associated data. "These responses are denoted as Functors 327"** (Emphasis added). Thus, a "functor," as claimed, must be a function in the form of a program with any associated data. Wall discloses "functions" but it does not disclose "functors" as there is no disclosure, or even a suggestion, in Wall of functions comprising both programs and data, as claimed. It is proper to refer to the disclosure to ascertain a meaning of a claimed term. Therefore, the Examiner may not ignore the meaning of these terms (and the corresponding dearth of disclosure of these features in Wall) merely because they are not defined within the claims themselves.

With regard to the Examiner's assertion, at page 23 of the Office Action, that there is insufficient antecedent basis for "the collected functor objects containing the data and programs" in claims 1, 9, and 10, these claims have been amended to recite "the **received** functor objects containing the data and programs," or something similar. Therefore, reconsideration of Applicant's argument that Wall does not disclose such "received functor objects containing the data and programs" is respectfully solicited.

Applicant respectfully disagrees with the Examiner's assertion, at page 23 of the Office Action, that Applicant's "teaching away" argument is not persuasive because disclosed examples and preferred embodiments do not constitute a "teaching away." In particular, Wall specifically discloses that the "network of linked data objects and/or function objects are independently published to, and subscribed to, in a manner **free of a globally predefined network** of data objects and/or function objects, thereby generating the emergent model" and does not disclose another embodiment. Thus, Wall expressly leads in a direction away from a "predefined simulation framework," as claimed.

At least claims 2, 3, 11, and 12 are directed to a "spreadsheet;" specifically, "mapping content from a plurality of cells of the spreadsheet to the one or more functor objects, wherein the content includes the data and programs for the functor objects for input into the financial model" as in claim 2, "mapping content including the data from a plurality of cells of the spreadsheet to one or more classes, wherein each of the one or more classes duplicates functionality of the spreadsheet when the functor object is used to encapsulate or access the one or more classes," as in claim 3, "a spreadsheet-to-object mapper configured, via the one or more processors, to map content from a plurality of cells of the spreadsheet to the one or more functor objects, wherein the content includes the data and programs for the functor objects for input into the financial model,"

as in claim 11, and "a spreadsheet-to-class mapper configured, via the one or more processors, to map content including the data from a plurality of cells of the spreadsheet to one or more classes, wherein each of the one or more classes duplicates functionality of the spreadsheet when the class is used to create a functor object," as in claim 12, are separately patentable.

Wall discloses no such "spreadsheet," as claimed. The "spreadsheet tool," described at col. 1, lines 47-50 of Wall, "can be used to build a financial model of a particular business (system) to predict financial behavior, thus allowing a user to evaluate and choose among various solutions (designs)." However, nowhere in Wall is there any disclosure or suggestion of "**mapping content** from a plurality of cells of the spreadsheet to the one or more functor objects, **wherein the content includes the data and programs for the functor objects for input into the financial model**" or "**mapping content** including the data from a plurality of cells of the spreadsheet to one or more classes, **wherein each of the one or more classes duplicates functionality of the spreadsheet when the functor object is used to encapsulate or access the one or more classes**," or "a **spreadsheet-to-object mapper** configured, via the one or more processors, to map content from a plurality of cells of the spreadsheet to the one or more functor objects, **wherein the content includes the data and programs for the functor objects for input into the financial model**," or "**a spreadsheet-to-class mapper** configured, via the one or more processors, to map content including the data from a plurality of cells of the spreadsheet to one or more classes, **wherein each of the one or more classes duplicates functionality of the spreadsheet when the class is used to create a functor object**."

One advantage of the claimed spreadsheet-to-object mapper, as claimed, is that it enables spreadsheet users to add re-usable formulas to a simulation framework (e.g., claim 1: "a **simulation framework linked to re-usable financial components** based upon the received

functor objects containing the data and programs") without learning a programming language. Wall offers no such advantage because Wall fails to disclose either "a **simulation framework linked to re-usable financial components** based upon the received functor objects containing the data and programs" or "**mapping content** from a plurality of cells of the spreadsheet to the one or more functor objects, **wherein the content includes the data and programs for the functor objects for input into the financial model**."

In response to Applicant's argument that Wall fails to disclose the claimed spreadsheet, at pages 23 through 24 of the Office Action, the Examiner asserted that Wall discloses the use of spreadsheet tools and content within the cells of an associated spreadsheet, suggesting the applicability of spreadsheet tools to a financial model.   Applicant respectfully disagrees.

A general teaching of spreadsheets, as in Wall, hardly suggests the very specific combination of elements recited in the present claims.   For example, claim 2 recites, mapping content from a plurality of cells of the spreadsheet to the one or more functor objects, wherein the content includes the data and programs for the functor objects for input into the financial model." Thus what is mapped is content from cells of a spreadsheet to "functor objects."   Moreover, the content includes the data and programs for the functor objects for input into the financial model. Wall does not disclose, and does not even suggest, any functor objects, as claimed, much less, the relationship of such functor objects to a spreadsheet, wherein content from cells of the spreadsheet includes data and programs for the functor objects for use as input to the claimed model.

In fact, prior art spreadsheets, as in Wall, represent the problem to be solved by the present invention.   That is, while spreadsheets can be part of a solution along with mapping technology, the claimed invention employs functor requestors issued through a workflow router,

and the functor requestors encapsulate code for distribution to the receiver, with the receiver encapsulating a program for a response (see claim 3, for example). That program complies with the interface of the functor requestor.

In Wall, the ultimate computations of interest are performed by an "emergent model." But, in the claimed invention, the ultimate computations of interest are performed by a generated financial model, wherein users approve of selected ones financial components. Thus, Wall and the claimed invention describe different approaches for building a model, and the resulting models have different technical characteristics, despite any similarity of computational goals. That is, while both Wall and the claimed invention have a common objective in producing a computational result with multiple disparate data sources, they differ greatly on the structures and methods for building and executing the computational structure that performs the computations of ultimate interest. This difference is brought out in the claims in the recitation of, for example, issuing **functor requests** and "**receiving one or more functor objects** containing the data and programs from the users **responsive to the functor requests**." Such functor requests and functor objects are simply unknown to Wall.

Thus, no *prima facie* case of anticipation and/or obviousness has been established regarding the subject matter of claims 1-3, 9-12, and 24. Therefore, the rejection of claims 1-3, 9-12, and 24 under 35 U.S.C. §102(e) /35 U.S.C. §103(a) is neither factually nor legally viable.

Accordingly, withdrawal of the rejection of claims 1-3, 9-12, and 24 under 35 U.S.C. §102(e) /35 U.S.C. §103(a) is respectfully solicited.

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The rejection of claims 4, 6 through 8, 13, 15 through 18, and 20 through 23 under 35 U.S.C. §103(a) is respectfully traversed.

The Examiner acknowledged that Wall fails to disclose outputting the financial model, providing a user with a plurality of input parameters including operators, dynamically receiving one of the input parameters from the user in support of a what-if analysis of the financial model, and generating a simulation result in response to the received input parameter for retrieval by the user over the data network. Yet, in spite of all of these shortcomings, the Examiner asserted that Adler discloses all of these features and that it would have been obvious to modify Wall to provide for all of these features because "one would have been motivated to assess the risks and rewards of alternative decisions and to identify the most promising strategy to pursue" (Office Office Action-page 17). Applicant respectfully disagrees.

Adler does not cure the deficiencies of Wall, previously argued, Adler is not combinable with Wall and, even if combined, the combination of references would not result in the claimed invention.

Since Adler does not cure the previously argued deficiencies of Wall, claims 4, 6, 8, 13, 15-18, 20, and 23 are allowable for this reason alone. To the extent Adler may be interpreted to disclose a simulation framework, it is not "simulation framework linked to re-usable financial components based upon the received functor objects containing the data and programs," as claimed. There is no disclosure or suggestion in either Wall or Adler of functor requests and functors, or "functor objects," as claimed.

Moreover, Wall and Adler are not combinable, as they, in fact, teach away from each other. A reference may be said to "teach away" when a person of ordinary skill, upon [examining] the reference, would be discouraged from following the path set out in the reference or would be led in a direction divergent from the path that was taken by the applicant. *In re*

Gurley, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131 (Fed. Cir. 1994). Since Adler requires a simulation framework, and Wall rejects "globally predefined network of data objects and/or function objects" (See, abstract, for example), the teachings of the applied references are incompatible with each other, discouraging persons of ordinary skill in the art from employing the teachings of Adler to follow the path set out in Wall. In fact, the teachings of Wall, rejecting "globally predefined network of data objects and/or function objects," would have led persons of ordinary skill in the art in a direction divergent from the path that was taken by Applicant.

Moreover, Adler is directed to the design of a simulation framework but does not disclose any means for groups of users to collaborate formally over a network in enhancing such a framework (Adler does not even disclose any network diagrams). Wall, too, is devoid of any collaboration structure, and is, instead, directed to building data flow networks using distributed object technology. The peer-to-peer system of Wall permits every user to publish objects with any arbitrary interface, with other users choosing to use those objects. However, any process of negotiating those interfaces is not disclosed by Wall.

Unlike Adler, the instant claimed invention is not directed to simulation frameworks, *per se*, but, rather, to simulation frameworks that can work with functor requestors and functors containing data and programs. This has the advantage of providing an ability to help multiple users collaborate in making additions to a programming framework. Thus, in essence, a mobile code is provided that can be moved, stored, and retrieved for later compilation and linking.

While the claimed invention provides a method and apparatus for collaboratively adding objects and classes to a simulation framework, both Wall and Adler pre-suppose that this process

of collecting and negotiating the content of data sources and functions occurs externally to their systems.

Even if each object in Adler was run in the manner prescribed by Wall, the instant claimed invention would not result because neither Wall nor Adler discloses, or suggests, any steps or components corresponding to functor requestors and/or functors.

Another reason Adler would not be combined with Wall is that Adler's simulations, similar to the claimed invention, do not map well to the data-flow networks of Wall. Both Adler and the claimed invention are concerned with running many simulations and incorporating varying programmatic behaviors because they both analyze multiple alternate futures. Therefore, both Adler and the claimed invention are directed to easily running many variations of a simulation. In Wall, though data sources may be changed, resulting in a plurality of outcomes to consider or optimize, Wall's process is very complicated since changing a function in an emerging network entails stopping an object, starting a replacement object, possibly re-linking the object with the network, and then, in some undisclosed manner, resetting the network. There are no means, in Wall, for grouping variant sets of data inputs, much less programs and/or functions, as scenarios. The data-flow networks, as represented by Wall, lack effective management and efficient construction of time-based simulation, which the claimed invention seeks to improve upon.

Even if combined, the applied references would not result in the claimed invention. The Examiner's assertion that the references would be combined because "one would have been motivated to assess the risks and rewards of alternative decisions and to identify the most promising strategy to pursue" is not only a mere generalization, but falls far short of the "articulated reasoning with some rational underpinnings" required by the U.S. Supreme Court,

KSR Int'l Co. v. Teleflex, Inc., 127 S. Ct. 1727, 82 USPQ2d 1385 (2007). Such "articulated reasoning with some rational underpinnings" would require at least an explanation of what it is, in either reference or in common knowledge that would have led the person of ordinary skill in the art to modify something in Wall because of some teaching, whether in Adler, or elsewhere, in order to provide for the claimed invention. The Examiner asserted that making the combination is merely a matter of applying known elements according to known methods to yield predictable results. Applicant respectfully disagrees. There is nothing known, prior to Applicant's invention, about Applicant's claimed collection of data in a multi-user peer-to-peer collaborative environment over a data network by: issuing functor requests through a workflow router to users for data and programs; and receiving one or more functor objects from the users responsive to the functor requests, wherein a financial model, comprising a simulation framework linked to re-usable financial components based upon the received functor objects containing the data and programs, is generated, and there is clearly no evidence provided by the Examiner that it would have been obvious to further modify this subject matter, as in claim 4, wherein the steps of outputting the financial model, providing a user with a plurality of input parameters including operators, dynamically receiving one of the input parameters from the user in support of what-if analysis of the financial model, and generating a simulation result in response to the received input parameter for retrieval by the user over the data network, are provided.

Even if one were to take each object disclosed in Adler and provided those objects to the system of Wall, the claimed invention would not result because neither Wall nor Adler provides for anything corresponding, or even remotely similar, to the claimed functor requestors and functors. Moreover, the combination is improper because the simulations in Adler, being different from those in Wall, would not map well to the data-flow networks of Wall. The

changing of a function in an emerging network in Wall entails stopping an object, starting a replacement object, and possibly re-linking the object with the network, along with some way of resetting the network. There is no way, in Wall, of grouping variant sets of data inputs, let alone programs and/or functions, as in the claimed invention.

For at least the reasons above, no *prima facie* case of obviousness has been established with regard to claims 4, 6, 8, 13, 15-18, 20, and 23. Thus, the rejection of claims 4, 6-8, 13, 15-18, and 20-23 (now claims 4, 6, 8, 13, 15, 17, 18, 20, and 23) under 35 U.S.C. §103(a) is neither factually nor legally viable. Accordingly, withdrawal of this rejection is respectfully solicited.

Therefore, the present application, as amended, overcomes the rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at (703) 519-9952 so that such issues may be resolved as expeditiously as possible.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 504213 and please credit any excess fees to such deposit account.

Respectfully Submitted,

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